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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/717,232	11/19/2003	John Parker	27049-21	6897

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Woodard, Emhardt, Moriarty, McNett & Henry LLP  
Bank One Center/Tower  
Suite 3700  
111 Monument Circle  
Indianapolis, IN 46204-5137

EXAMINER

TRIEU, THAI BA

ART UNIT	PAPER NUMBER
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3748

DATE MAILED: 12/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/717,232	<b>Applicant(s)</b> PARKER, JOHN	
	<b>Examiner</b> Thai-Ba Trieu	<b>Art Unit</b> 3748	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☒ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-18 is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>03/08/2004</u> . | 6) <input type="checkbox"/> Other: ____.  |

### DETAILED ACTION

The election of the species of Figures 3a and 3b filed on October 18, 2004, is acknowledged; however, rendered moot in view of the allowance of the generic claim. Accordingly, the restriction requirement mailed on July 20, 2004 is hereby withdrawn; claims 1-18 are allowable over prior art.

This application is in condition for allowance except for the following formal matters:

#### **1. IN THE ABSTRACT:**

Applicant is requirement to submit a substitute abstract to meet the requirement set forth below:

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within **the range of 50 to 150 words**. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. **The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided**. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

#### **2. IN THE SPECIFICATION:**

##### **a. Arrangement of the Specification:**

The following headings of the specification are missing, such as:

**-- BACKGROUND OF THE INVENTION --** should be inserted after the title of "VARIABLE GEOMETRY TURBINE" of Page 1.

**-- BRIEF SUMMARY OF THE INVENTION --** should be inserted after line 26 of Page 3.

**-- BRIEF DESCRIPTION OF THE DRAWINGS --** should be inserted after line 21 of Page 4.

**-- DESCRIPTION OF A PREFERRED EMBODIMENT --** should be inserted before line 1 of Page 5.

b. The specification fails to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: Specifically:

- ***"first annular flange"*** (See Claims 1-2, 4, 6, and 8).
- ***"first annular seal"*** (See Claims 1-6).
- ***"second annular seal"*** (See Claim 7).

### **3. IN THE DRAWINGS:**

a. Figure 1 should be designated by a legend such as **-- Prior Art --** because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.121(d)) so

as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action.

b. The drawings fail to show "**a vane support ring 11**" (See Page 5, line 10), and "**embodiment of Figures 8**" (See Page 9, line 19) as described in the specification. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement-drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant

will be notified and informed of any required corrective action in the next Office action.

c. The reference character **"12"** has been used to designate both "support pins 12" (See Page 5, line 10) and "turbine wheel" (See Page 5, line 15). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement-drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action.

#### **4. IN THE CLAIMS:**

1. In claim 1, line 8, "the said facing wall" should be replaced by -- **the facing wall --**, or -- **said facing wall --** (for avoiding the redundancy).

2. In claim 1, line 15 **"one or more inlet bypass passages"** should be replaced by -- **at least one of inlet bypass passages --**; and line 20, **"the or each bypass passage"** should be replaced by -- **said at one of inlet bypass passages --**.

3. Applicant is suggested to correct the claims to rewrite claims 16-18 in a conventional way, for example:

a. Claim 16:

-- 16. A turbocharger [[comprising]] having a variable geometry turbine comprising:

a turbine wheel supported in a housing for rotation about a turbine axis,

an annular inlet passageway extending radially inwards towards the turbine wheel, the annular inlet passageway being defined between a radial wall of a moveable wall member and a facing wall of the housing, the moveable wall member being mounted within an annular cavity provided within the housing and having inner and outer annular surfaces,

the wall member being moveable axially between first and second positions to vary the width of the inlet passageway,

the second axial position being closer to said facing wall of the housing than the first axial position, the moveable wall member having a first annular flange extending axially from the radial wall into said cavity in a direction away from said facing wall of the housing,

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a first annular seal being disposed between said first annular flange and the adjacent inner or outer annular surface of the cavity, said first annular seal being mounted to one of said first annular flange or said adjacent annular surface of the cavity;

wherein one or more inlet bypass passages are provided in the other of said first annular flange and said adjacent annular cavity surface, such that said first annular seal and bypass passageways move axially relative to one another as the moveable wall member moves between said first and second positions; and

wherein said first annular seal and the or each bypass passage are axially located such that with the annular wall member in said first position the seal prevents exhaust gas flow through the cavity but with said moveable wall member in the second position the or each bypass passage permits the flow of exhaust gas through said cavity to the turbine wheel thereby bypassing the annular inlet passageway.--

b. Claim 17, lines 1-2 should be rewritten by following:



1. - 17. A turbocharged internal combustion engine comprising a turbocharger according to claim [[15]] 16 --; or

2. -17. A turbocharged internal combustion engine [[comprising]] having a turbocharger with a variable geometry turbine comprising:

a turbine wheel supported in a housing for rotation about a turbine axis,

an annular inlet passageway extending radially inwards towards the turbine wheel, the annular inlet passageway being defined between a radial wall of a moveable wall member and a facing wall of the housing, the moveable wall member being mounted within an annular cavity provided within the housing and having inner and outer annular surfaces,

the wall member being moveable axially between first and second positions to vary the width of the inlet passageway,

the second axial position being closer to said facing wall of the housing than the first axial position, the moveable wall member having a first annular flange extending axially from the radial wall into said cavity in a direction away from said facing wall of the housing,

a first annular seal being disposed between said first annular flange and the adjacent inner or outer annular surface of the cavity, said first annular seal being mounted to one of said first annular flange or said adjacent annular surface of the cavity;

wherein one or more inlet bypass passages are provided in the other of said first annular flange and said adjacent annular cavity surface, such that said first annular seal and bypass passageways move axially relative to one another as the moveable wall member moves between said first and second positions; and

wherein said first annular seal and the or each bypass passage are axially located such that with the annular wall member in said first position the seal prevents exhaust gas flow through the cavity but with said moveable wall member in the second position the or each bypass passage permits the flow of exhaust gas through said cavity to the turbine wheel thereby bypassing the annular inlet passageway.--

c. Claim 18 should be rewritten the same format of claims 16 and 17 being set forth above.

### **Conclusion**

The IDS (PTO-1449) filed on March 08, 2004 has been considered. An initialized copy is attached hereto.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Kunderman (US Patent Number 3,478,955) discloses a variable area diffuser for compressor.
- Moser (US Patent Number 4,499,731) discloses a controllable exhaust gas turbocharger.
- Paker (US Patent Number 5,941,684) discloses a variable turbine.
- Parker et al. (US Patent Number 5,522,697) discloses load reducing variable geometry turbine.
- Walsham (US Patent Number 6,203,272 B1) discloses a variable geometry turbine.

Prosecution on the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

A shortened statutory period for reply to this action is set to expire **TWO MONTHS** from the mailing date of this letter.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thai-Ba Trieu whose telephone number is (571) 272-4867. The examiner can normally be reached on Monday - Thursday (6:30-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas E. Denion can be reached on (571) 272-4859. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TTB  
December 1, 2004



Thai-Ba Trieu  
Patent Examiner  
Art Unit 3748